Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

AMENDMENTS TO THE CLAIMS

The following list of claims replaces all prior versions and lists of claims:

1.   (Original)   A method of determining an amount of bandwidth needed on a link, the method comprising:

determining, based on user behavior and traffic characteristics, said amount; and

storing said amount in memory.

2.   (Original)   The method of Claim 1, wherein said user behavior comprises an average time between arrivals of calls made by one or more users using said link.

3.   (Original)   The method of Claim 1, wherein said user behavior comprises an average duration of calls made by one or more users using said link.

4.   (Original)   The method of Claim 1, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.

5.   (Original)   The method of Claim 1, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.

6.   (Original)   The method of Claim 1, wherein determining said amount is based on a specified number of users.

7.   (Original)   The method of Claim 1, wherein determining said amount is based on a grade of service (GoS) factor.

8.   (Original)   The method of Claim 1, wherein determining said amount is based on a quality of service (QoS) factor.

9.   (Original)   The method of Claim 1, wherein determining said amount is based on a specified maximum call blocking probability requirement.

10.   (Original)   The method of Claim 1, wherein determining said amount is based on a

Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

specified maximum packet loss probability requirement.

11.   (Original)   The method of Claim 1, wherein determining said amount is based on a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.

12.   (Original)   The method of Claim 1, wherein determining said amount is based on a probability that a packet will be lost when said packet is sent through a link that:
has a specified amount of bandwidth; and
is being used by a specified number of users.

13.   (Original)   The method of Claim 1, wherein determining said amount is based on a product of:
a probability that a specified number of users are using said link when a specified
        maximum call blocking probability requirement is satisfied relative to said link;
        and
a probability that a packet will be lost when said packet is sent through a link that:
        has a specified amount of bandwidth; and
        is being used by said specified number of users.

14-19. (Canceled)

20.   (Original)   A computer-readable medium carrying one or more sequences of instructions for determining an amount of bandwidth needed on a link, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
determining, based on user behavior and traffic characteristics, said amount; and
storing said amount in memory.

21.   (Original)   The computer-readable medium of Claim 20, wherein said user behavior comprises an average time between arrivals of calls made by one or more users using said link.

Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

22. (Original) The computer-readable medium of Claim 20, wherein said user behavior comprises an average duration of calls made by one or more users using said link.

23. (Original) The computer-readable medium of Claim 20, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.

24. (Original) The computer-readable medium of Claim 20, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.

25. (Original) The computer-readable medium of Claim 20, wherein determining said amount is based on a specified number of users.

26. (Original) The computer-readable medium of Claim 20, wherein determining said amount is based on a grade of service (GoS) factor.

27. (Original) The computer-readable medium of Claim 20, wherein determining said amount is based on a quality of service (QoS) factor.

28. (Original) The computer-readable medium of Claim 20, wherein determining said amount is based on a specified maximum call blocking probability requirement.

29. (Original) The computer-readable medium of Claim 20, wherein determining said amount is based on a specified maximum packet loss probability requirement.

30. (Original) The computer-readable medium of Claim 20, wherein determining said amount is based on a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.

31. (Original) The computer-readable medium of Claim 20, wherein determining said amount is based on a probability that a packet will be lost when said packet is sent through a link that:

has a specified amount of bandwidth; and

4

Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

is being used by a specified number of users.

32.   (Original)   The computer-readable medium of Claim 20, wherein determining said amount is based on a product of:

a probability that a specified number of users are using said link when a specified

maximum call blocking probability requirement is satisfied relative to said link;

and

a probability that a packet will be lost when said packet is sent through a link that:

has a specified amount of bandwidth; and

is being used by said specified number of users.

33.   (Original)   An apparatus for determining an amount of bandwidth needed on a link, comprising:

means for determining, based on user behavior and traffic characteristics, said amount;

and

means for storing said amount in memory.

34.   (Original)   The apparatus of Claim 33, wherein said user behavior comprises an average time between arrivals of calls made by one or more users using said link.

35.   (Original)   The apparatus of Claim 33, wherein said user behavior comprises an average duration of calls made by one or more users using said link.

36.   (Original)   The apparatus of Claim 33, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.

37.   (Original)   The apparatus of Claim 33, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.

38.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a specified number of users.

39.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a

Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

grade of service (GoS) factor.

40.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a quality of service (QoS) factor.

41.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a specified maximum call blocking probability requirement.

42.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a specified maximum packet loss probability requirement.

43.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.

44.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a probability that a packet will be lost when said packet is sent through a link that:
has a specified amount of bandwidth; and
is being used by a specified number of users.

45.   (Original)   The apparatus of Claim 33, wherein determining said amount is based on a product of:
a probability that a specified number of users are using said link when a specified
        maximum call blocking probability requirement is satisfied relative to said link;
        and
a probability that a packet will be lost when said packet is sent through a link that:
        has a specified amount of bandwidth; and
        is being used by said specified number of users.

46.   (Original)   An apparatus for determining an amount of bandwidth needed on a link, comprising:
        a network interface that is coupled to a data network for receiving one or more
        packet flows therefrom;

Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

a processor; and

one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:

determining, based on user behavior and traffic characteristics, said amount; and

storing said amount in memory.

47.   (Original)   The apparatus of Claim 46, wherein said user behavior comprises an average time between arrivals of calls made by one or more users using said link.

48.   (Original)   The apparatus of Claim 46, wherein said user behavior comprises an average duration of calls made by one or more users using said link.

49.   (Original)   The apparatus of Claim 46, wherein said traffic characteristics comprise an average time between arrivals of packets on said link.

50.   (Original)   The apparatus of Claim 46, wherein said traffic characteristics comprise an average duration of periods during which packets are transmitted relatively continuously on said link.

51.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a specified number of users.

52.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a grade of service (GoS) factor.

53.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a quality of service (QoS) factor.

54.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a specified maximum call blocking probability requirement.

55.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a specified maximum packet loss probability requirement.

Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

56.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a probability that a specified number of users are using said link when a specified maximum call blocking probability requirement is satisfied relative to said link.

57.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a probability that a packet will be lost when said packet is sent through a link that:
has a specified amount of bandwidth; and
is being used by a specified number of users.

58.   (Original)   The apparatus of Claim 46, wherein determining said amount is based on a product of:
a probability that a specified number of users are using said link when a specified
maximum call blocking probability requirement is satisfied relative to said link;
and
a probability that a packet will be lost when said packet is sent through a link that:
has a specified amount of bandwidth; and
is being used by said specified number of users.

59.   (New)   An apparatus for determining an amount of bandwidth needed on a link, comprising:
a network interface that is coupled to a data network for receiving one or more packet flows therefrom;

a processor; and

one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:

receiving a number of users to be supported by a communication link;
receiving one or more Grade of Service (GoS) factors;
receiving one or more Quality of Service (QoS) factors;
determining user behavior relative to the communication link;
determining characteristics of traffic on the communication link;

Serial No. 10/646,661
Cheung et al. - GAU 2616 (Moore)
Docket No. 50325-0796
Response to Restriction Requirement mailed 4/17/07

determining, based on both the user behavior and the traffic

characteristics, a minimum amount of bandwidth required for the

communication link to support the number of users while

satisfying the QoS and GoS factors;

and

storing the determined bandwidth amount in memory.